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TECHNICAL
MEMORANDUM

(TM Series)

Utility System Programming Proposals

Proposal for Modifying
Prepare Master Tape II (PMTII) Routine

By
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29 March 1963

Approved
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SYSTEM

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This document is one of a series of TM-890 volumes established for Utility System Programming proposals.

Comments on this document must be received by 22 April 1963 to be reflected in the final design criteria.

Proposal for Modifying Prepare Master Tape II (PMTII) Routine

PMTII mod AC would be modified to read and scan each element on the base tape to obtain its direct references, if the use of a base tape on unit one was specified on the function card. These references would then be used in developing the new master tape directory's cross-reference block in the same way as is done presently.

Purpose of Modification

In the present PMTII, extraneous references can occur as in the following example:

If the PREDICT function references the TAN routine directly and the TAN routine uses the SIN routine, then without distinguishing how TAN and SIN are referenced, the directory indicates that both TAN and SIN are required to operate PREDICT. Now, if the TAN routine is replaced by a version which no longer uses the SIN routine and PREDICT is not changed, then, although SIN is really no longer required by PREDICT, the new directory will still indicate that both TAN and SIN are required for the operating of PREDICT.

The reason for this is that direct references cannot be determined without scanning the routine, and this is done only for additions and routines which are changed. Hence, references indicated in the old directory for an unchanged routine are assumed to be valid and are carried over to the new directory.

The proposed modification would eliminate this type of problem by allowing
the environment of every routine to be recomputed from their direct references.

Usage Changes Caused by Modification

No usage change is produced since the modification is for an internal oper-
ation.

Affect on Time Required to Prepare a Tape

The modification would cause an extra pass through the base tape and would
necessitate an extra rewind of the base tape. The time for these two actions
depends, of course, on the length of the master file on the base tape, but with
the present file length the extra time required should be about one minute.

Implementation

The proposed modification, which is a fairly significant one, could be made
at the same time the modifications for the Two Tape system are being made.

Reference

Prepare Master Tape II (PMTII), Mod AC, Milestone 7, TM-1099/000/00,
System Development Corporation, 18 March 1963.

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UTILITY SYSTEM PROGRAMMING PROPOSALS -
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